

21



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,348	01/08/2001	Henrique S. Malvar	MS150913.1	6672

7590 11/19/2004

Himanshu S. Amin  
AMIN & TUROCY, LLP  
24TH Floor, National City Center  
1900 East 9TH Street  
Cleveland, OH 44114

EXAMINER

GRANT II, JEROME

ART UNIT PAPER NUMBER

2626

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/756,348	Applicant(s) MALVAR ET AL.	
	Examiner Jerome Grant II	Art Unit 2626	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

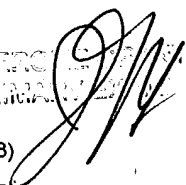
- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

JEROME GRANT II  
PATENT EXAMINER



Art Unit: 2626

Detailed Action

1.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 and 10-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Chui.

With respect to claim 1, Chui teaches a data compression system, comprising: a scanning component (106) which scans at least a portion (tile) of a transformed image (stored in 202) wherein the scan is performed substantially in a horizontal direction by a first portion and a vertical direction for a second portion. This is substantially shown by figures 2, 8c and 8d. See also col. 9, lines 35-40.

Art Unit: 2626

With respect to claims 2, 11 and 17, Chui teaches a contiguous scan is performed for respective sections (tiles) for improved compression of the transformed image. See also col. 9, lines 35-40.

With respect to claims 3, 12 and 18, Chui teaches the the claim limitation according to col. 9, lines 35-40 and col. 10, lines 58-65 regarding the generation of the wavelet coefficients.

With respect to claims 4, 13 and 19, Chui teaches this limitation i as discussed at col. 9, lines 35-40.

With respect to claims 5, 14 and 20, Chui teaches this limitation with respect to figure 2 and col. 4, lines 64-67.

With respect to claims 6 and 15, Chui teaches the LH sub-scans in the vertical direction and the HL sub-bands in the horizontal direction. See figure 2, the lower right portion of the figure. HL# extend in the horizontal direction and LH# extend in the vertical direction.

With respect to claims 7 and 21, see figures 2 via L, HH1, HH2....HH4.

With respect to claim, 8, the run length encoding is suggested according to the encoding procedure set forth at col. 5, lines 40-42 and 54-56.

With respect to claim 10, Chui teaches a data compression method, comprising: scanning component (106) which scans at least a portion (tile) of a transformed image (stored in 202) wherein the scan is performed substantially in a horizontal direction by a first portion and a vertical direction for a second portion. This is substantially shown by figures 2, 8c and 8d. See also col. 9, lines 35-40.

With respect to claim 16, Chui teaches a data compression system, comprising: means 106 for scanning a first portion of an image in a horizontal direction (see figure 2) and scanning a second portion in a vertical direction, see also figure 2, for the purpose of improving the compression method.

With respect to claim 22, Chui teaches an image compression system, 100, see figure 1, comprising: a wavelet transform subsystem (106) for transforming an image into wavelet coefficients; and a scanning component 200 which contiguously scans at least a portion of the transformed image (tile) wherein the contiguous scan is performed substantially in the horizontal direction by a first section and a vertical direction via a second section for an improved compression method. See col. 9, lines 35-40.

2.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chui in view of the Well Known Prior Art.

Chui specifically teaches the use of encoding of the wavelet coefficients as claimed. Refer to col. 5, lines 40-42 and 54-56.

What is not specifically shown is that the particular coding scheme is the Golomb Rice method. Applicant has not suggested that the Golomb-Rice method provides an advantage over other encoding methods. Hence, one of ordinary skill in the art would have known to substitute the the Golomb-Rice method in place of the encoding method taught by Chui. The motivation for making the substitution is that both encoding methods serve to facilitate the encoding of compressed images. It would have been obvious to one of ordinary skill in the art to replace the one type of encoding scheme with another for the purpose of encoding the compressed images which is a process well known in the art.

**Examiner's Remarks**

**3. Applicant argues at pages 7-9 of the remarks that with respect to claims 1-8 and 10-22, the claims are not anticipated because one portion being scanned in a horizontal direction and another portion being scanned in a vertical direction is not shown by Chiu. The examiner respectfully disagrees. The illustrations provided at figures 2, 8c and 8d address the claimed limitation. Furthermore, col. 5, lines 28-30 teach each tile of the raw image is transformed into wavelet coefficients and are compressed and encoded. At col. 9, lines 5-15, horizontal scanning is performed on row portions LL2/1, LL 3/2 and LL4/3. At col. 9, lines 17-29, vertical scanning is performed on column portions LL1/1, LL2/2, LL3/3. Lastly, col. 9, lines 35-40 address both vertical and horizontal raster scanning. Hence, this limitation is clearly taught by Chui (6,343, 155).**

**With respect to the argument regarding claim 9, applicant argues that the rejection to this claim should be withdrawn in view of subject matter not shown in the independent claim. The examiner respectfully disagrees for the same reasons as presented in the arguments to claims 1-8 and 10-22.**

4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 703-305-4391. The examiner can normally be reached on Mon.-Fri. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams, can be reached on (703) 305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

J. Grant II  
JEROME GRANT II  
703-305-4391